Lister Institute,
Chelsea Bridge Road,
S.W.1.
4th.December 1953.

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Dear Josh,

Thanks for your air-letter of 9 Oct. I have written to the publishers about address etc. for your and N's reprints. The number of J.G.Microbiol. concerned is due in a week or two now. I see Kauffmann has put a bit in Acta Path.Microbiol.Scand. on transduction, its a pity the only interesting part, i.e. transfer of I, is, I gather not a real transduction at all. (Also was what we knew already about SW543)

I write to tell you, as you may by now have discovered, that SL 28 also has its Fla locus linked to H_1. I don't know why I missed it before. Its a nice strain, sensitive to phage 22, and has enabled us (I and Quadling, a B.Sc. in botany who has joined me as research assistant to do a bit of mapping (on the assumption of linearity, and that transduction involves substitution of a single linear piece only). The strain used are SW 543, SW 553 and SL 28 (SL 13, the para-A O, in my hands is refractory, or nearly so, to all lysates except SW 534). All six interactions yield swarms with intrinsic antigen of receptor, so there are 3 different Fla loci involved. All 3 strains give ~~the same~~ 1 swarms when treated with lysate of TM 2, so all are linked to H_1. Using concentrated cells and serum motility plates to detect the doubles, 553 and 543 interact each way to give doubles. Therefore H_1 is between Fla (543) and Fla (553). Similarly 28 and 553 interact each way to give doubles. Therefore H_1 is between Fla (28) and Fla (553). Finally 543 with lysate of 28 gives doubles, therefore Fla(28) is not between H_1 and Fla (543). Thus order is F(553) - H_1 - F(543) -F(28). We have only tested 28 with lysate of 543 a couple of times so far, with negative results: we are now repeating, also control with lysate of 543 Fla+ mutant which ought to go O.K. I see from one of your earlier letters that you found SL 13, SW 553 and SW 543 all interacted O.K. How do present findings fit in with yours? I must send this down now to be typed, more later.

Yours sincerely,

I seem to have too many things to do at once at the moment. Q. is doing a lot of routine combinations of O (and paralysed) strains. I will send you ~~B.Stocker~~ synopsis of results when we have redone all the ones that go OK. Still can't lyse SW545, SW548, SL51 & some of your more recent ones.

I suppose Rubbo is with you now. Give him my regards if he is. Last time I saw him he was at the L.S.H.

trying one of our Dip Bact class expts. in bact. genetics, to get himself au fait with the materials etc.

I will send you summary of the micro-manip. expts. next time I write. They are more or less in abeyance until we get a microscope + manipulator hot box rigged up., as I don't want to use 37° → Room temp. cycle which may complicate things, & first nuclei appear inconveniently late at room temperature.

No other news to speak of. Could you send copy for Quadling when you send reprint of the serological translocation paper please. Hope to hear from you and/or Esther soon again. Is it snowing yet? V. warm here which is odd.

Yr Bruce